

American Creosote Works Pensacola, FL

June 6, 2012

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Outline

- ▶ Overview
- ▶ Recent Stormwater Line Activities
- ▶ Operable Units
- ▶ Proposed containment strategy
- ▶ Next Steps

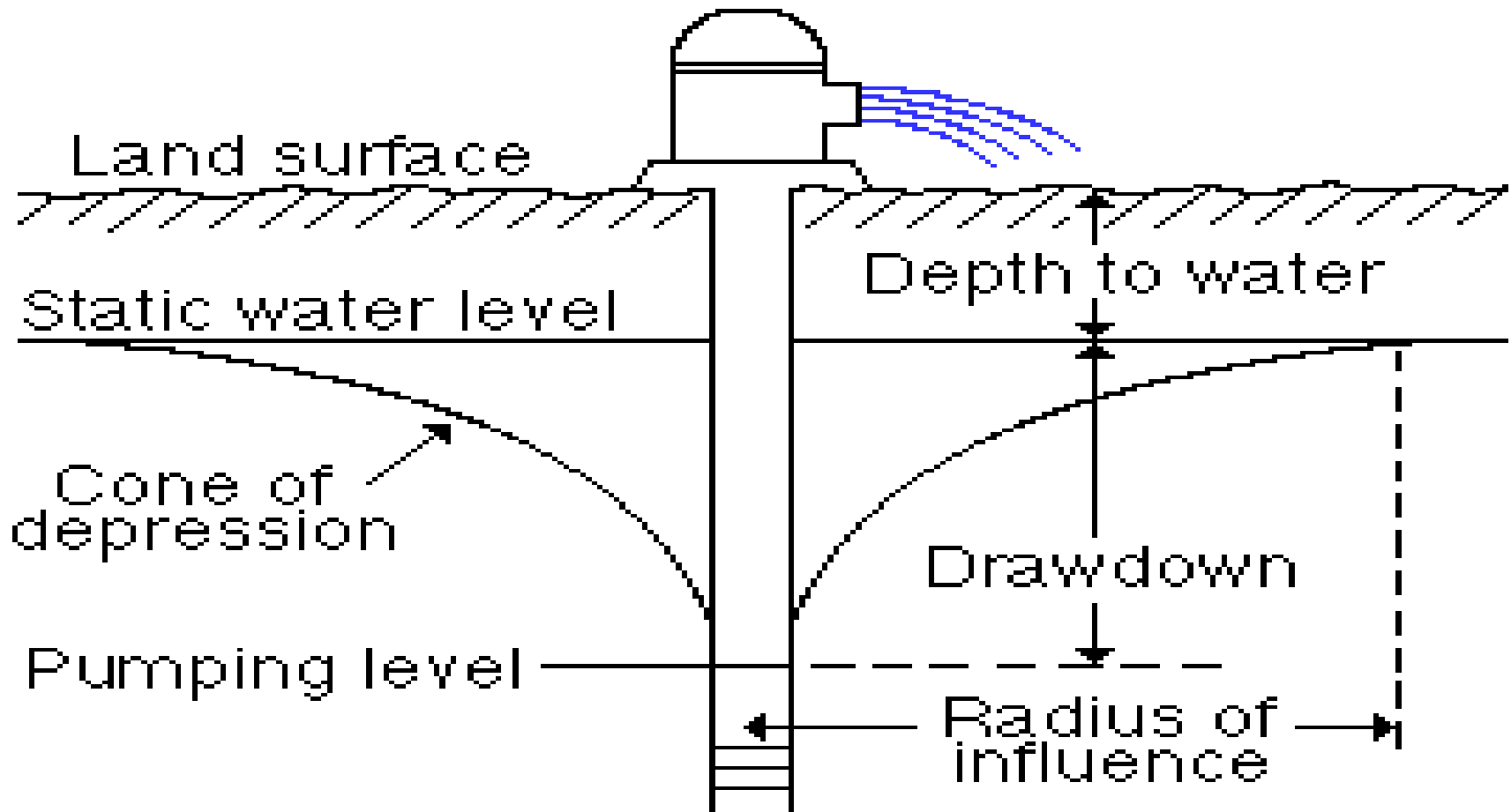
ACW Aerial Photo



Stormwater Line Project

- Project will make the PYC ditch dry, resulting in easier cleanup and remediation of the ditch
- Improve the water quality of the storm water entering Pensacola Bay
- Will require dewatering for some portions of the project
 - common practice in Pensacola

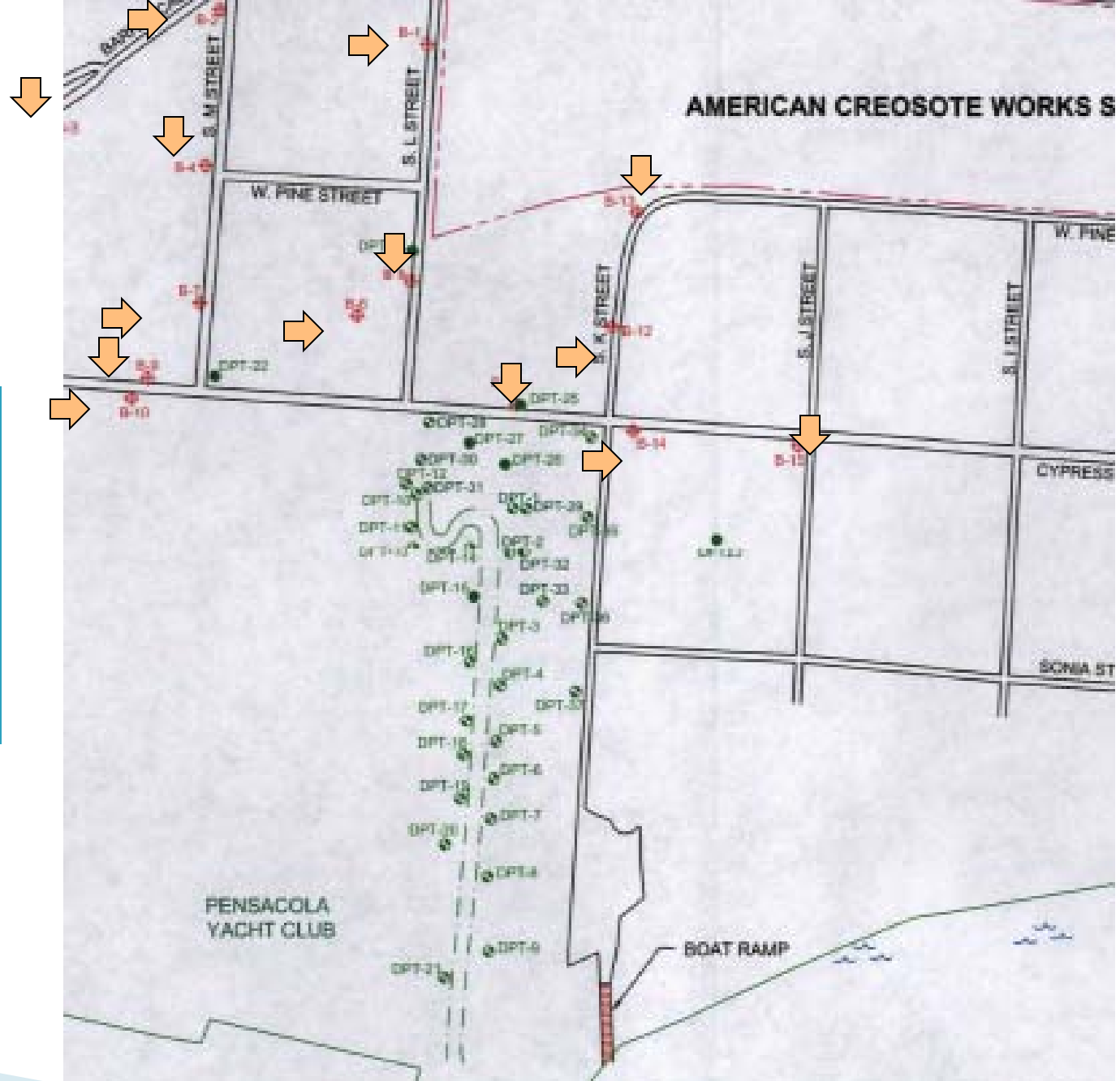
Groundwater Pumping



16 feet to 135 feet Radius of Influence range

2009 Vapor Intrusion Study

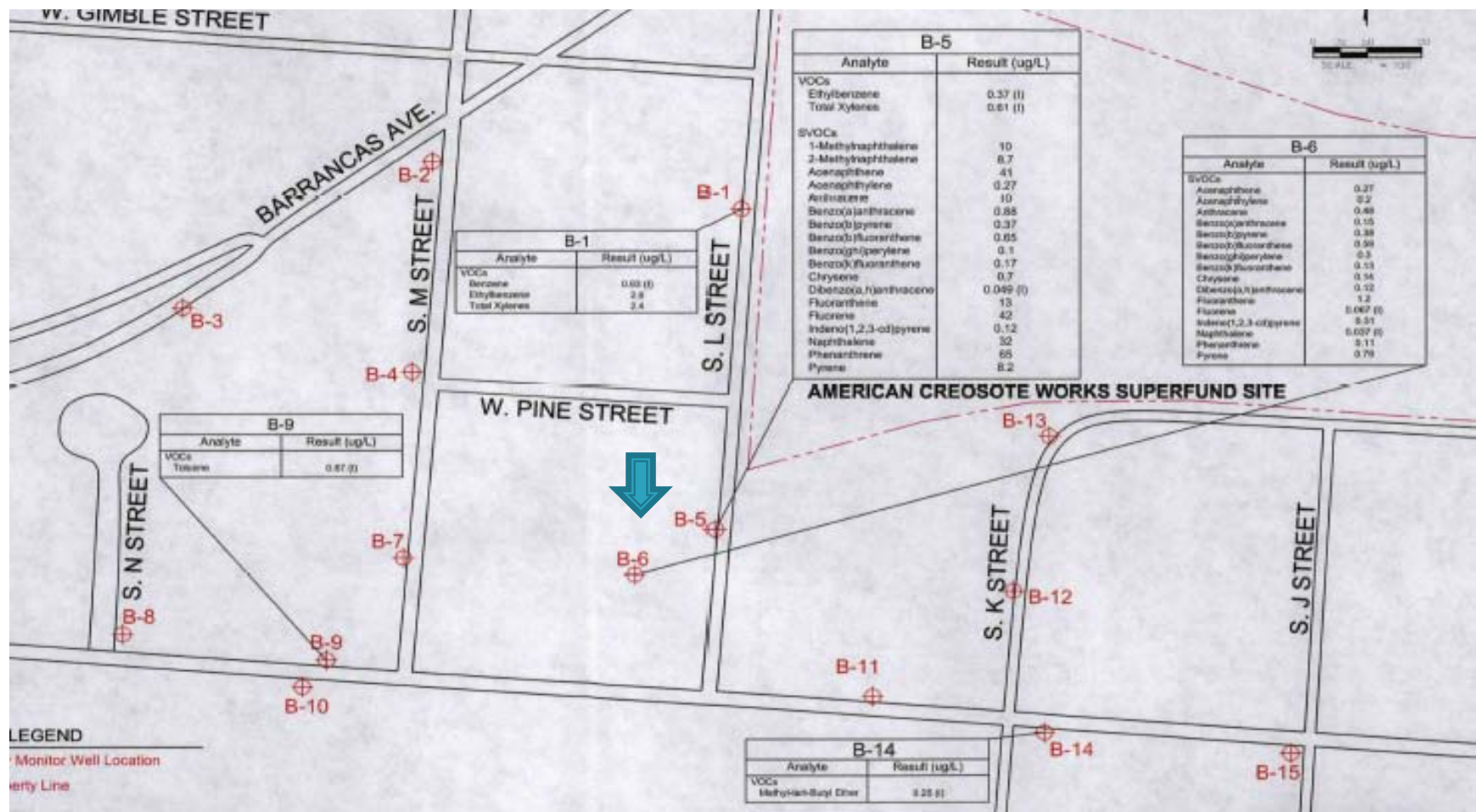
15 shallow
groundwater
samples



Sample Point B-5

Acenaphthene - 41 ug/L (GTCL 20 ug/L)

Naphthalene – 32 ug/L (GTCL 14 ug/L)



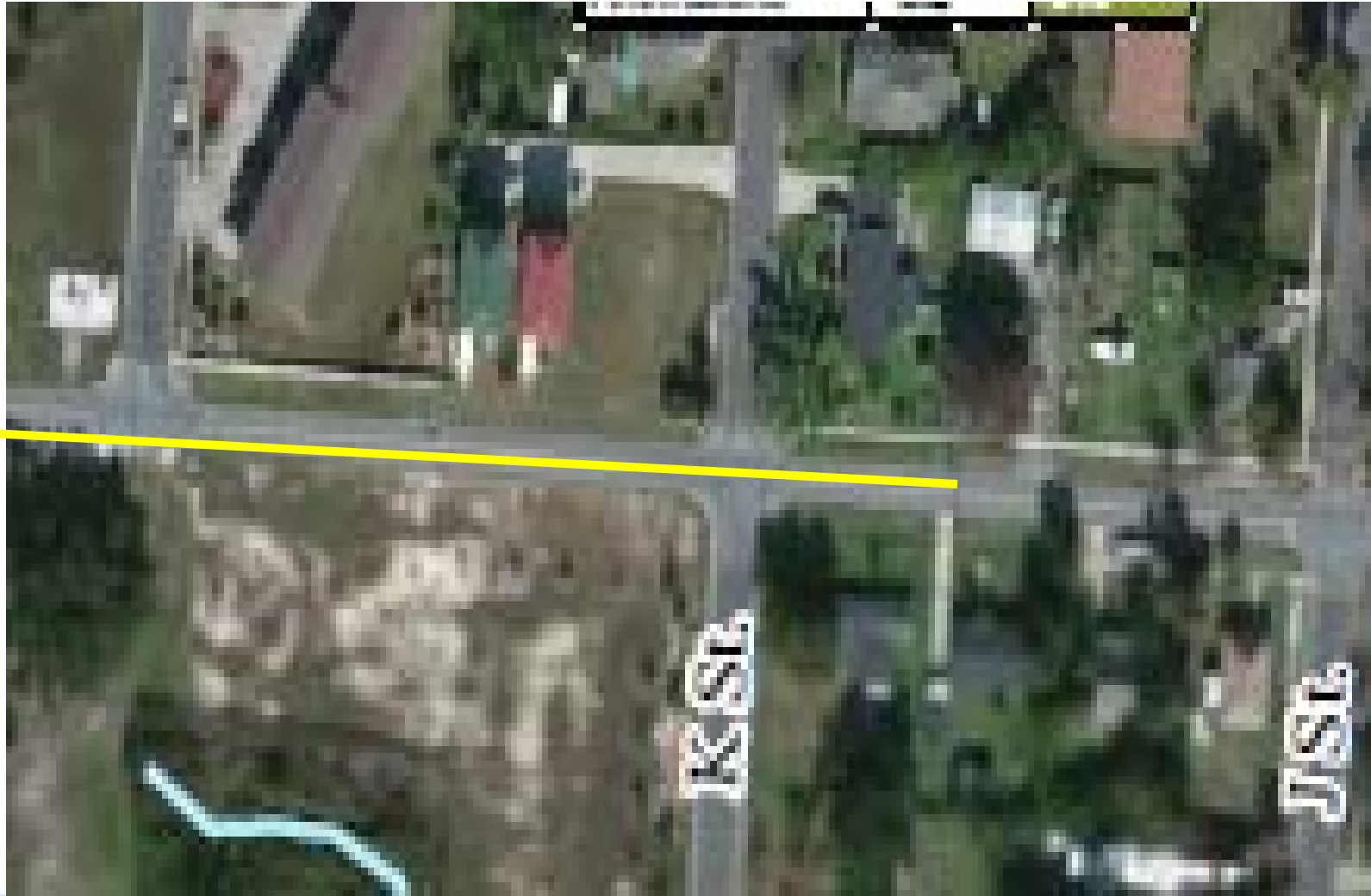
Dewatering Area



Monitoring Well Network

- ▶ The wells are screened below what could have been effected by the pumping
- ▶ ACW-C2-MW-06 screened 11–21 ft
- ▶ ACW-C9-MW-05 screened 26–36 ft
- ▶ No contaminants in either 2011 or 2012 sampling event.

Horizontal Bore



Horizontal Bore (cont.)

- ▶ The stormline will be installed using a horizontal drill rig
- ▶ The environmental by-product will be soil cutting
- ▶ Soil cutting will be transported back to the site to be incorporated into the final design
- ▶ City's contractor will be performing air monitoring
- ▶ EPA's contractor will have air monitoring on ACW and will verify the air monitoring at the work site

Connection of old and new Stormwater Lines

- ▶ Must dewater to connect the old and new stormwater lines
- ▶ EPA will be treating the groundwater during the dewatering
- ▶ Pre-work sample to determine what is going to be pumped
- ▶ Air Strippers will remove contaminants before onsite reinjection
 - Similar to groundwater treatment system
 - Treatment will remove 99% Benzene, 73% Naphthalene
- ▶ Duration of 1 to 2 days

Questions?

ACW Operable Units (OUs)

- ▶ Three Operable Units
 - OU1: Sludge, soil and sediment
 - OU2: Groundwater
 - OU3: Offsite dioxin-contaminated soil (2007)
- ▶ Current goal is to write a Site wide ROD contains all three OUs

Sitewide Feasibility Study

▶ Soil

- ACW soils (on facility)
- Off facility residential soils

▶ Groundwater

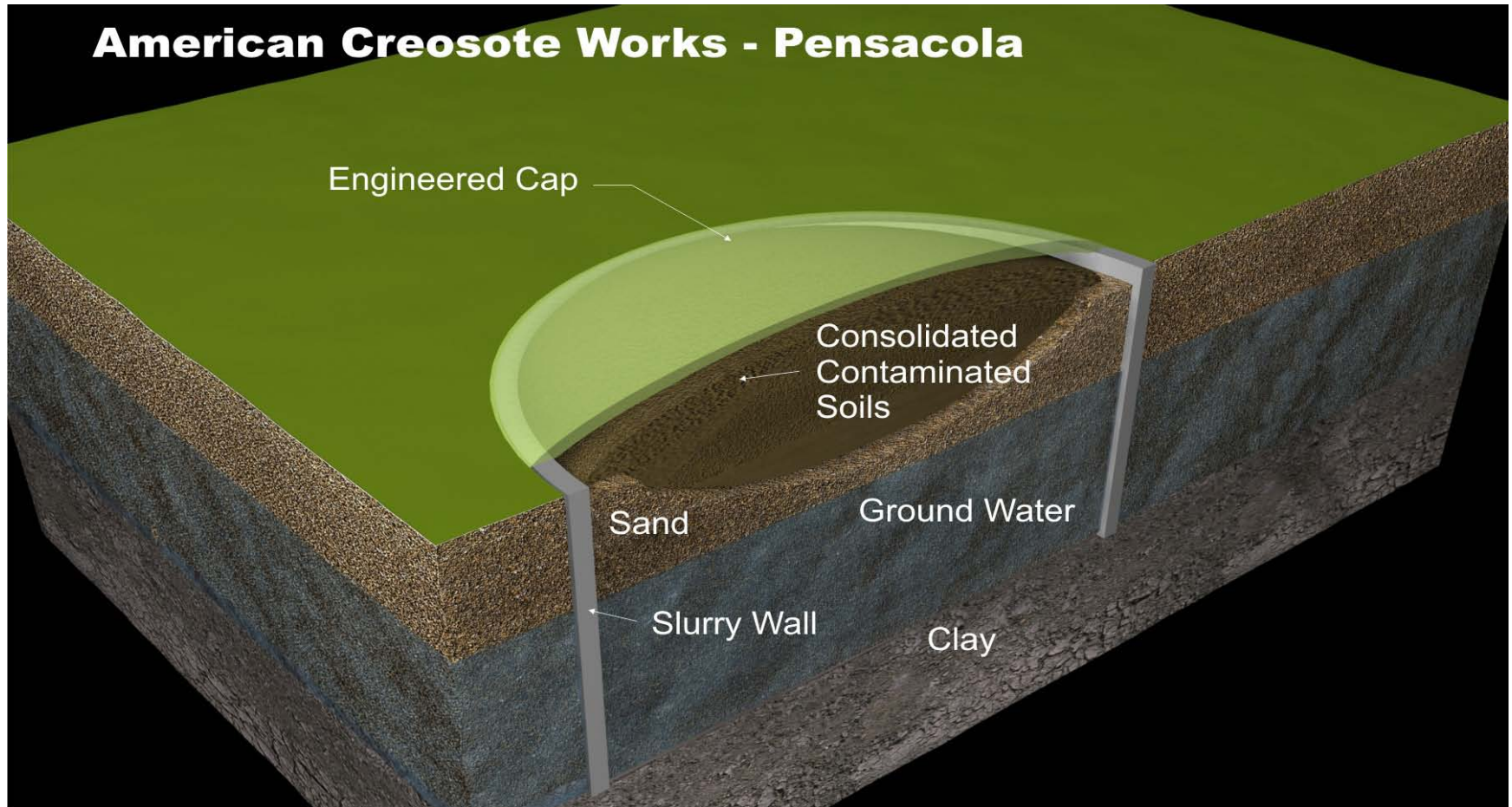
- Source Area (dipping ponds)
- On facility DNAPL impacted area
- Off facility DNAPL impacted area

Proposed Containment Remedy

- ▶ Containment Strategy for the Source Area – Former Dipping Ponds
- ▶ Install barrier wall down to 100'+ and cap the surface
 - Clay layer found beneath the site at 100' BLS
 - 8 borings that have contact with the clay layer
 - Several soil samples show low permeabilities



Slurry Wall



Permeability Values of Clay

- | ▶ Clay permeabilities | | cm/second | ft/yr |
|-----------------------|-----------------|-----------------------|-------|
| ◦ B-3A | 108' BLS | 1.09×10^{-8} | 0.001 |
| ◦ SB516 | 104'–112' BLS | 1.9×10^{-9} | 0.002 |
| ◦ SB518 | 113.5'–117' BLS | 2.0×10^{-9} | 0.002 |
| ◦ SB522 | 82' – 85' BLS | 1.1×10^{-8} | 0.01 |
-
- | ▶ Soil permeabilities | | | |
|-----------------------|----------|-----------------------|------|
| ◦ 15TG46 | 41' BLS | 4.34×10^{-7} | 0.46 |
| ◦ 18TG9 | 7.1' BLS | 6.79×10^{-7} | 0.70 |
-
- ▶ Rule of Thumb 1×10^{-6} cm/sec \cong 1 ft/yr

Cutter Soil Mixing equipment



DNAPL Areas

- ▶ Treatment Strategy for the extended DNAPL plume onsite and extended DNAPL plume offsite
- ▶ Extended DNAPL plume onsite (outside of barrier wall) has two major zones, 40' to 85' and 135' to 145'

National Remedy Review Board

- ▶ Presentation required for all remedies over \$25 million
- ▶ Presentation in front of all 10 EPA Regions
- ▶ Highlights the site

Next Steps – Short Term

Optimal Project Schedule

Provide Sitewide Feasibility Study for FDEP review – late June 2012

Finalize Sitewide Feasibility Study – July 2012

Present at National Remedy Review Board, Issue Proposed Plan – August 2012

Public Comment Period – August/September 2012

Site Wide ROD – September 2012

Next Steps – Long Term

Optimal Project Schedule

Site Wide OU1/OU2/OU3

- Remedial Design – Fall 2012 to Fall 2013
- Remedial Action – Starts Winter 2014

Questions?